AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A herpes simplex virus vector (HSV vector) that does not replicate in adult normal cells, that induces a viral gene expression and a viral replication specifically in a proliferating cells that express calponin, and that is capable of suppressing its replication at a desired timing by using the thymidine kinase gene, wherein the HSV vector is a recombinant HSV vector with a DNA fragment comprising:
(i) a promoter region of the human calponin gene ~~comprising~~ consisting of the nucleotide sequence of SEQ ID NO.: 3;
(ii) the ICP4 gene encoding a transcription factor essential for initiation of a herpes viral replication which is integrated downstream of the promoter region of the human calponin gene,
(iii) the EGFP gene linked to the downstream of the ICP4 gene via an internal ribosomal entry site; and
(iv) the LacZ gene which is integrated upstream of said promoter region of the human calponin gene;
wherein the DNA fragment is inserted by recombination into the ribonucleotide reductase gene locus of the HSV vector that comprises an endogenous thymidine kinase gene and lacks functional endogenous ICP4 gene, and the expression of both the LacZ gene and

the EGFP gene integrated in the vector are used as markers to identify the recombinant HSV vector.

2-5. (Cancelled)

6. (Previously presented) The HSV vector according to claim 1, wherein an enhancer is integrated upstream of the promoter region of the human calponin gene.

7. (Previously presented) The HSV vector according to claim 6, wherein the enhancer is a 4F2 enhancer.

8.-19. (Cancelled)

20. (Previously presented) A method for expressing a gene, protein or a peptide of a vector that is not replicated in adult normal cells, comprising, introducing the HSV vector according to claim 1 into the cells and tissues of an organism, then expressing and replicating the gene, protein, or peptide of the vector.

21. (Previously presented) A method for suppressing the expression of a gene, protein or a peptide of the HSV vector according to claim 1 comprising,

(i) introducing the HSV vector according to claim 1 into the cells and tissues of an organism,

(ii) expressing and replicating the gene, protein or peptide of the vector, and

(iii) suppressing the expression and replication of the vector at a later desired period by administering an antiviral drug, wherein said antiviral drug is aciclovir or ganciclovir.

22.-24. (Cancelled)

25. (Previously presented) The method according to any one of claims 20 or 21, wherein the cells and tissues in the organism are tumor tissues, vascular or lymphatic vessel constriction tissues, nephritic tissues or fibrotic tissues.

26. (Previously presented) A therapeutic drug comprising the HSV vector according to claim 1 wherein proliferating smooth muscle cells are targeted.

27.-34. (Cancelled)

35. (Currently amended) A method for producing a cell-specific HSV vector that does not replicate in adult normal cells, that induces a viral gene expression and a viral replication specifically in a proliferating cells that express calponin, and that is capable of suppressing its replication at a desired timing by using the thymidine kinase gene, said method comprising the steps of:

(a) preparing a DNA fragment comprising,

(i) a promoter region of the human calponin gene ~~comprising~~ consisting of the nucleotide sequence of SEQ ID NO.: 3,

(ii) the ICP4 gene encoding a transcription factor essential for initiation of a herpes viral replication which is integrated downstream of the promoter region of the human calponin gene,

(iii) the EGFP gene linked to the downstream of the ICP4 gene via an internal ribosomal entry site, and

(iv) the LacZ gene integrated upstream the promoter region of the human calponin gene,

(b) preparing recombinants by cotransfection with the HSV vector that comprises an endogenous thymidine kinase gene and lacks functional endogenous ICP4 gene together with the DNA fragment into a cell in which a promoter region of the human calponin gene that comprises the nucleotide sequence of SEQ ID NO.: 3 can be activated or a cell which expresses the human calponin gene; wherein the DNA

fragment is inserted by a homologous recombination into the ribonucleotide reductase gene locus of the HSV vector,and

(c) screening a recombinant HSV vector and selecting a single clone of the HSV vector from the recombinants by limiting dilution without using agarose overlay assay using the expressions of both the LacZ gene and the EGFP gene as markers.

36. (Previously presented) The method for producing the HSV vector according to claim 35, wherein the cell is an ICP4 (-) cell.